MEMORANDUM

State of Alaska

84-733

TO: Phyllis Weber
Habitat Biologist
Anchorage

DATE: March 20, 1984

FILE NO:

TELEPHONE NO: 465-4290

FROM: Janet E. Hall
Area Habitat Biologist
Habitat Division
Department of Fish and Game

SUBJECT: Juneau area anadromous fish streams

ALASKA DEPT. OF FISH & GAME
MAR 27 1984
REGIONAL OFFICE

I have noted these discrepencies in the stream Atlas for map Juneau B-2;

1. Duck Creek and Jordan Creek (111-50-10600 and 111-50-10620)

The drainage in Section 20 shown to enter Duck Creek in Section 19 actually enter Jordan Creek. Jordan Creek does not end in Section 20, but continues into Section 17. Jordan Creek is utilized by rearing, spawning and migrating coho for all of this length. Enclosed are copies of fisheries information collected by Sport Fish Division. Dolly Varden Char have been trapped in the Dudley Street area.

The USGS map may have been correct, but suburban development, including roadways and solid fill construction pads may have altered the drainage patterns. Enclosed are photo copies of aerial photographs; I have traced the drainages in color for Duck Creek. I've also enclosed maps of Jordan Creek.

Done Jan 4/84

2. Jordan Creek extends through the airport runway and meanders across the tide flats. The Atlas shows the creek ending somewhat upstream of the runway culvert.

3. Unnamed creek, near Switzer Creek. Rick and I both recall submitting a nomination form for this short pink salmon stream which passes under Egan Expressway, Glacier Highway and Sunny Drive. This creek joins 111-40-10060 below Egan Expressway.

resubmit

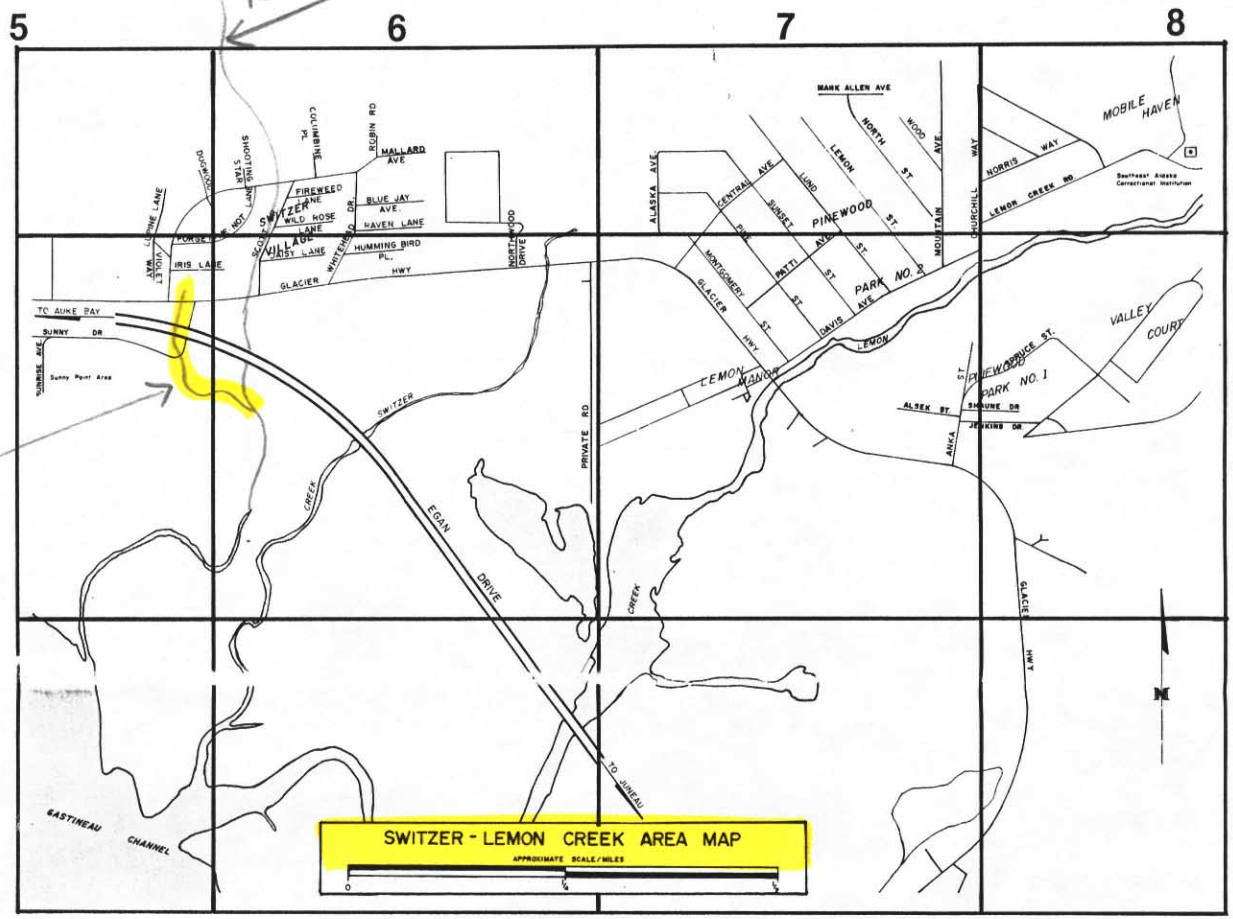
4. Little Auke Creek is one of three identified tributaries to Auke Lake. The other two streams, Lake Creek and Auke Creek are already in the atlas. Again, Rick and I both recall submitting a nomination for this producer of coho, sockeye and pink salmon and Dolly Varden char, but we note that it isn't included in the 1984 update.

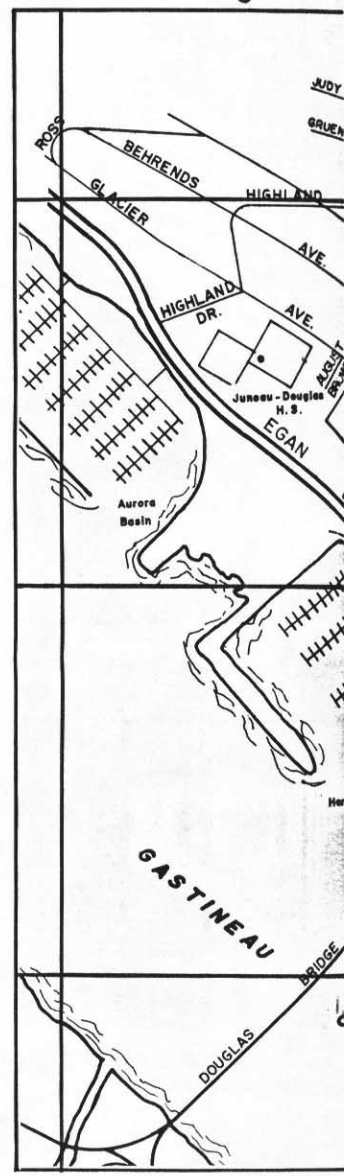
resubmit

5. Auke Creek, Stream No. 111-50-10420, is shown passing through Auke Lake and then into Lake Creek. Lake Creek should be given its own stream number.

Done Jan 4/84

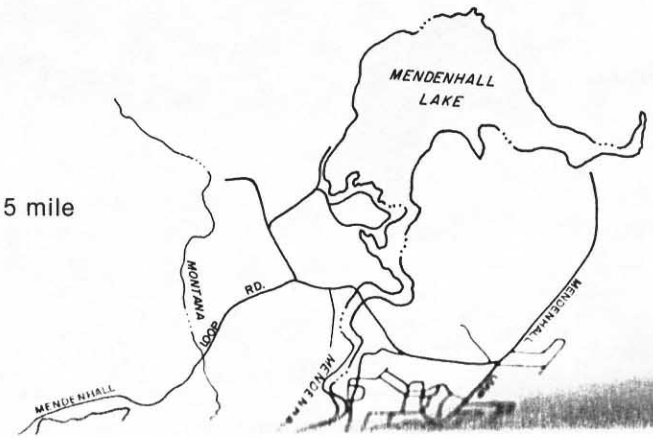
02-001A(Rev. 10/79)





Beyond the Map

Ferry Terminal — 14 mile
Auke Bay Recreational Area — 15 mile
St. Therese — 23½ mile
Eagle Beach — 29 mile
End of the road — 42 mile



Record of Telephone Conversation

Person Calling: P. Weber Phone Number: X 294

Address: _____

Person Called: R. Reed / J. Hall Phone Number: ~~465-4290~~

Address: RI Habitat

_____

Date: March 28, 1984 Time: 11:00 am

Subject: Juneau area anadromous fish streams

Comments/discussion:

Done jew 4/84

1. Jordan Creek was previously documented as important for anadromous fish up to the headwaters. The headwaters are wrong on the U.S.G.S. map, they should be located in Section 17, not section 20. This correction should be made for 1984 revision.

request hand-drawn map

2. USGS map is wrong. Change won't change our authority. Map should be changed.

3. We don't have a nomination. RI will re-submit.

4. This is O.K. Reed drew in wrong stream. We have included the stream he nominated. Refer to 1984 nomination, attached

Done jew OK 4/84 drafting dept PK 4-16-84

5. This should be re-numbered and re-named, Lake Creek is a 2nd order stream flowing into Auke Lake, it is not part of Auke Creek.

Map for Juneau B-2 is attached.

KEED

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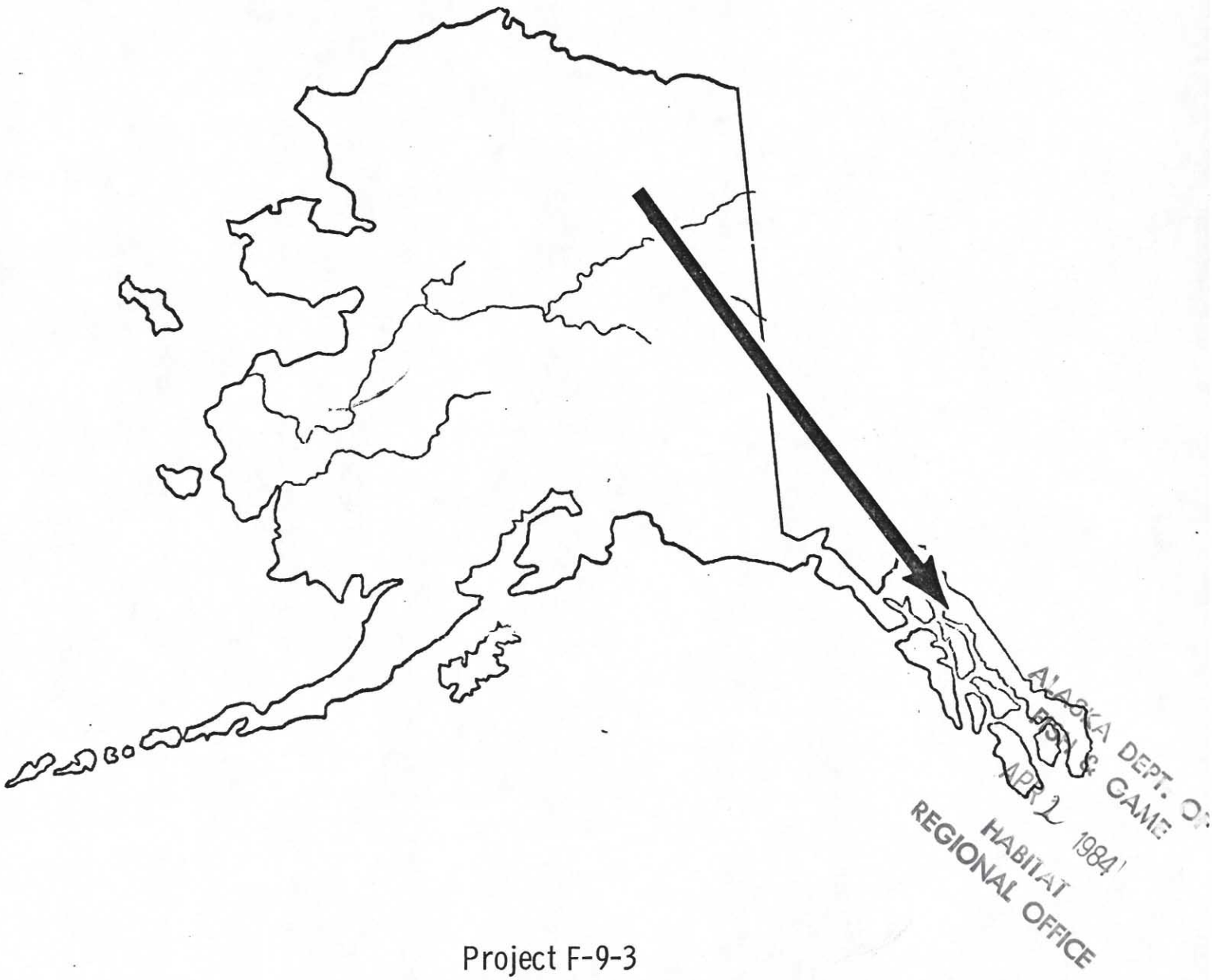
alaska department of fish & game

FEDERAL AID IN FISH RESTORATION PROJECT

DIVISION OF SPORT FISH

JOB R-IV-C DOLLY VARDEN SPORT FISHERY - JUNEAU AREA.

Richard D. Reed and
Robert H. Armstrong



Project F-9-3

Volume 12

Job No. R-IV-C

STATE OF ALASKA

William A. Egan, Governor

Annual Progress Report for

DOLLY VARDEN SPORT FISHERY - JUNEAU AREA

by

Richard D. Reed and Robert H. Armstrong

ALASKA DEPARTMENT OF FISH AND GAME

Wallace H. Noerenberg, Commissioner

DIVISION OF SPORT FISH

Rupert E. Andrews, Director

Howard E. Metsker, Coordinator

hours of fishing they had caught 67 fish for a catch per angler hour of 0.29.

References: Anonymous, 1968 (Chemical data)
Baade, 1961 (Fishing history)
Bailey, 1971 (Salmon counts)
Bucaria, 1968 (Salmon info.)
McConaghy, 1969 (Hydrologic data)
Orth, 1967 (Location, Historical data)
Wadman, 1962 (Description)

Auke Lake

Survey Date Not Surveyed

Location: Lat. 58°23' Long. 134° 38' (12 miles NW of Juneau)

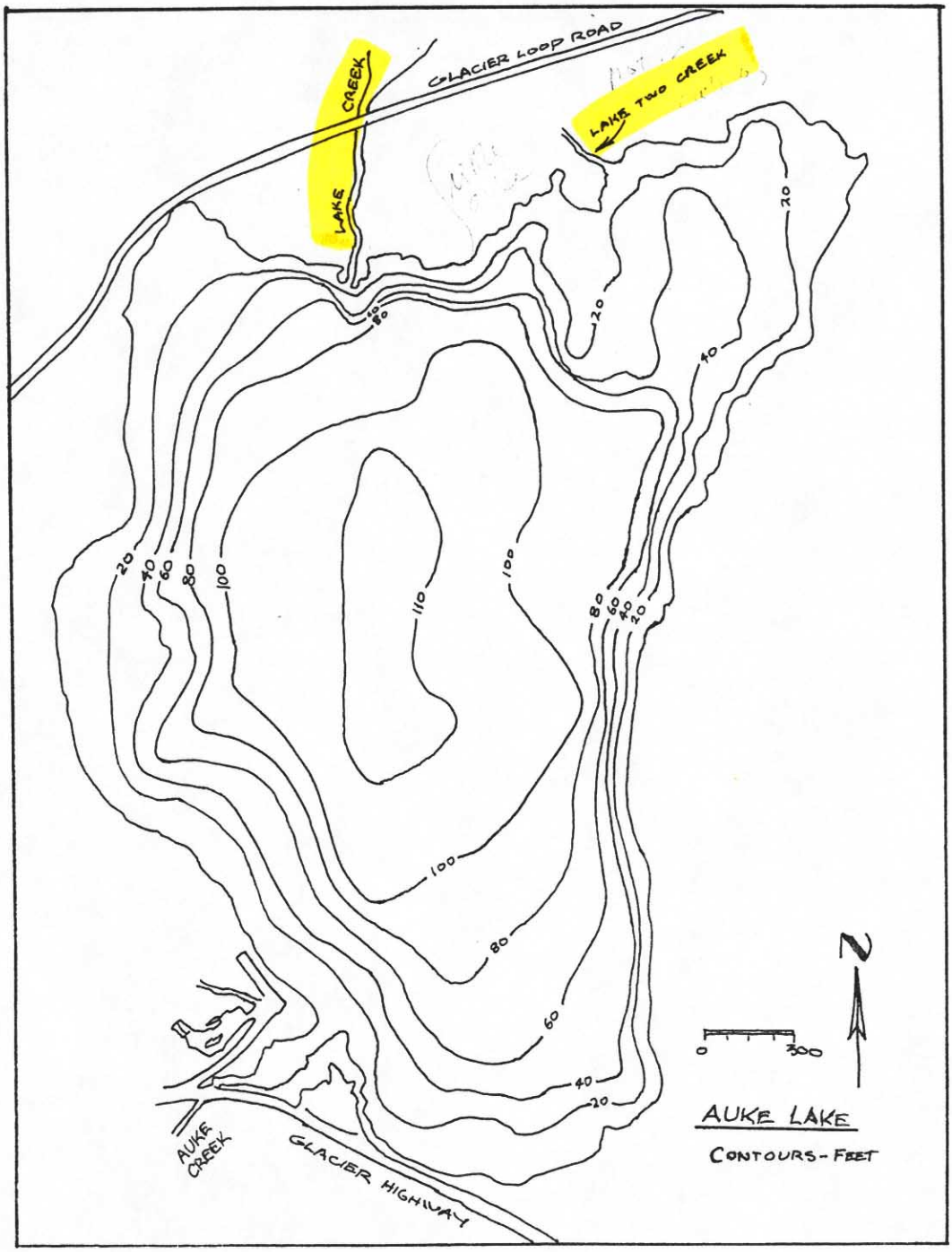
Description: Auke Lake is about one mile long and 3/4-mile wide and its greatest depth is 103 feet (see map). The water is clear, but brown color, and the lake bottom is predominantly mud with heavy layers of organic ooze. There is an abundance of pond lilies and eel grass around the lake perimeter. It has one outlet, Auke Creek, and two permanent inlets, Lake Creek, and Lake Two Creek (each creek is discussed separately). An extensive investigation of the physical, chemical and biological parameters of Auke Lake has been carried out by the National Marine Fisheries Service (Bureau of Commercial Fisheries) at the Auke Bay Biological Laboratory since 1962. The lake is located at the 35-foot elevation, and is bordered by the Glacier Highway, and the Mendenhall Loop Road. Although some sections of the shoreline are private property, public access is provided at the state access area off the Glacier Highway. Auke Lake was originally called Aylward Lake by early miners after Edward Aylward who, in 1884, located mining claims in the vicinity. The present name is derived from the Auk Indians, a subdivision of the Tlingit Indians (Orth, 1967).

Barriers: None in the outlet stream.

Species Present: Dolly Varden; cutthroat; brook trout, S. fontinalis; grayling, Thymallus arcticus; red, coho and pink salmon; stickleback; and cottids.

Rearing Habitat: Auke Lake provides rearing area for sockeye and coho salmon. It is questionable whether cutthroat and Dolly Varden use it for rearing. However, the lake does serve as an important wintering area for Dolly Varden.

Spawning Areas: The spawning areas in the lake are limited, however, two areas of sockeye lake spawning have been found (Bucaria, 1968). The majority of the spawning in the system occurs in the two inlet streams.



CONTOUR MAP OF AUKE LAKE (from Bucaria, 1968).

Planting History:	Date	Number of Fish
	1931	1050 brook trout
	1950	275 grayling

Both plants appear to have been failures, as there have been no reported catches of brook trout or grayling.

In addition to the above two plants, mention was made of plants of Dolly Varden; steelhead, Salmo guirdneri; and cutthroat prior to 1952, (Anon., 1952b); however, no records of these plants could be found.

Fishing History: A survey in 1961 was taken during the period May 20 through June 2 on Auke Lake. The results were 33 anglers caught 51 fish for a catch per angler hour of 1.55. An additional survey during 1961 revealed a catch of .095 fish per angler hour for 41 anglers during the period of June and July (Baade, 1962). During 1970, 28 anglers were checked on the lake. They had caught 33 fish in a period of 119 hours giving a catch per angler hour of 0.28.

References: Anonymous, 1950 (Planting), 1952b (Description)
Baade, 1961 (Description, fishing history)
Baade, 1962 (Fishing history)
Bailey, 1971 (Description, salmon info.)
Bucaria, 1968 (Salmon info.)
Heckart, 1969 (Planting)
Orth, 1967 (Location, historical data)
Wilding, 1939 (Description)

Auke Nu Creek (111-50-35) Survey Date: 7/23/70

Location: Lat. 58°23'00" Long. 134°39'57" (11 miles north of Juneau)

Description: Auke Nu Creek drains a watershed of approximately one square mile, flows under the Glacier Highway, and empties into the north side of Auke Bay. The stream has an average depth of about 1½ feet and width of 10 feet. The water is clear, but dark brown color, and stream flow is rapid. The stream bottom consists primarily of bed rock. Access from the highway is via a steep bank heavily covered with brush and loose rocks. The first 1/8 mile up from the mouth, the stream flows through a canyon which has very heavy brush cover. Approximately half way up the canyon, the stream starts to "stair-step" forming falls; however, these falls did not appear to be fish blocks. Above the canyon, the stream flows across about 1/16 mile of tableland with shallow banks and light brush cover. At the head of the tableland another canyon is encountered, extending approximately 1/8 mile. The survey was terminated at an impassible falls. Difficult fisherman access would probably limit fishing. The only

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alaska department of fish & game

FEDERAL AID IN FISH RESTORATION PROJECT

DIVISION OF SPORT FISH

JOB R-IV-C DOLLY VARDEN SPORT FISHERY - JUNEAU AREA.

Richard D. Reed and
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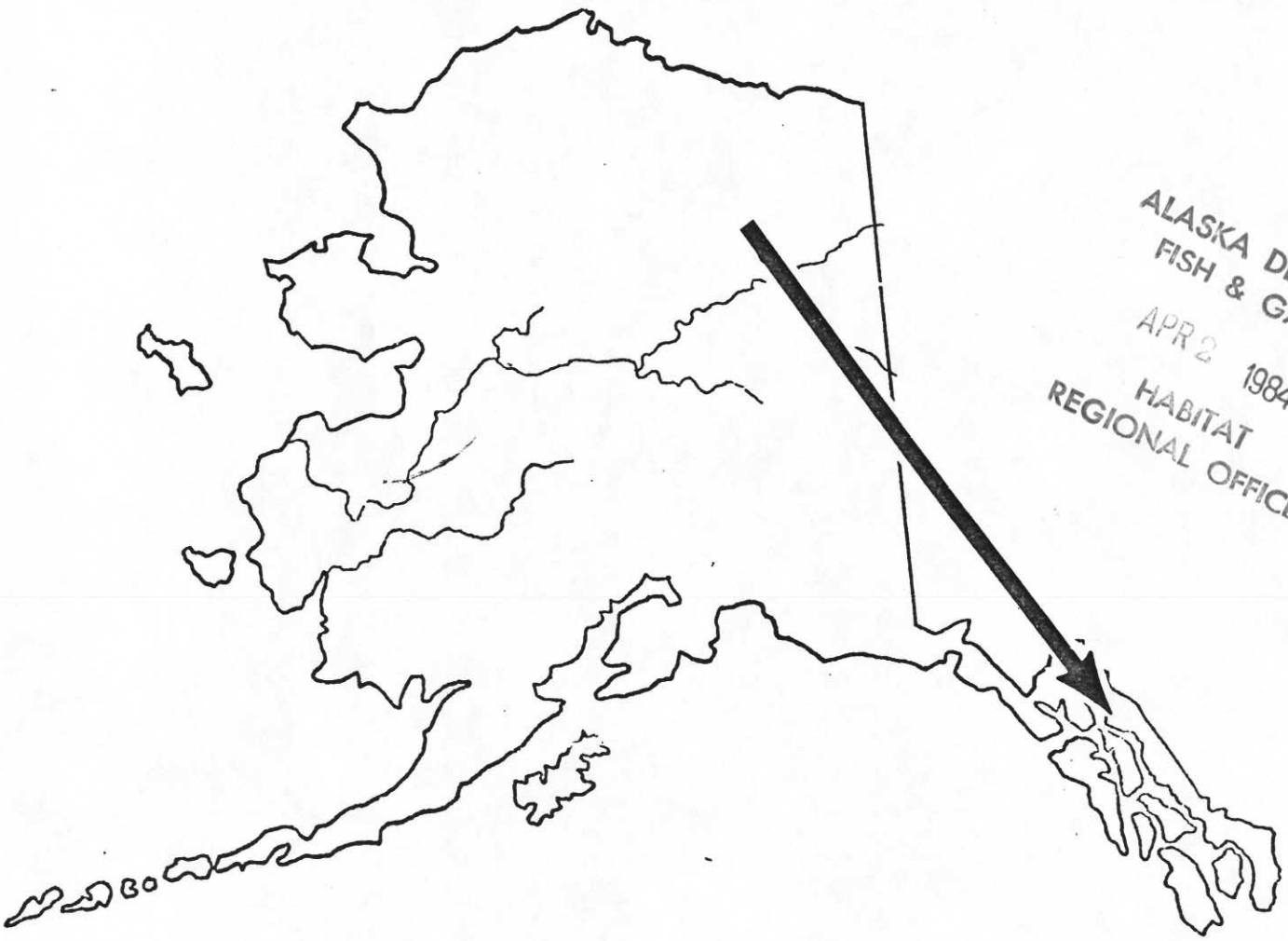

Project F-9-3

68-145 mm, ages I-VII years), and an anadromous Dolly Varden population (length 70-113 mm, ages II-III or IV years).

Spawning Areas:

Salmon Counts: None available.

Evaluation: The entire grass flat would be possible salmon spawning areas. The stream area above the road offered good spawning potential. Many areas of good gravel were connected by a series of small falls and/or slough areas.

Planting History: None known

Fishing History: Unknown

References: McConaghy, 1969 (Hydrologic data)
Orth, 1967 (Location)

Jordan Creek (111-50-62) Survey Date: 3/20-25-70

Location: Lat. 58°21'25" Long. 134°34'10" (9 miles NW of Juneau)

Description: Jordan Creek flows approximately three miles through the lower end of the Mendenhall Valley prior to emptying into a lagoon near the Juneau airport on Gastineau Channel. There are two tributaries to the system. One flows off Thunder Moutain and enters the main stream immediately upstream from the Glacier Valley School. This tributary has poor rearing potential, and has a probable barrier falls about 350 yards upstream. The stream appears to be subject to very high flows. The second tributary is small and after about 200 yards the stream grade becomes steep. This tributary also has poor rearing potential. Access to the main stream above Glacier Highway is poor. Not only are the banks brushy, but certain bank sections are in private ownership. Access to the lower stream section below the highway is somewhat better as the stream changes into a slough-like area. There is some access restriction in this stream section due to close proximity of the airport. Rechannelization of an approximate 1,000-foot section of the stream on the downstream side of the old Glacier Highway occurred in 1970. Pollution in the form of wash water discharge was noted throughout the lower sections of the system during the survey. An examination of the site revealed milky white effluent discharge with a temperature of 106°F. Further analysis by the NMFS Laboratory at Auke Bay revealed concentrations of Perchlorethelene from 0.43 to 0.77 ppb (McHugh, 1971).

Jordan Creek was named by Daniel Foster and M. Y. Hunt in 1895.

Later it became known as Livingston Creek, and then was renamed Jordan Creek in 1903 by Thomas Knudson (Orth, 1967).

This stream has been closed to salmon fishing since 1962.

Barriers: None

Species Present: Dolly Varden, coho salmon, stickleback.

Rearing Habitat:

Number of Areas: Logs 14, sloughs 26, undercut banks 13, pools 52.

Fish Observed:

Dolly Varden		Coho		Unknown	
Fry	Fingerling	Fry	Fingerling	Fry	Fingerling
44	4	877	458	1,503	1

Also, approximately 10,000 stickleback were observed in decreasing numbers from mouth to headwaters. (Note: Some unknown fry could have been the result of a recent plant of coho fry.)

Average Catch/Trap (n=8): Dolly Varden = 0.63, coho = 1.75, stickleback = 22.4

Evaluation: The overall rearing potential of the system appears to be good. There could be considerable competition between the stickleback and rearing fish. If pollution of the stream continues unchecked, its rearing capabilities may be seriously reduced.

Spawning Areas:

Salmon Counts:

Date	Fish Observed
8/18/62	none
1966	200 ± coho
10/14/69	60 coho

Evaluation: Overall spawning appears to be somewhat limited due to the small amount of gravel present. The majority of system has mud bottom and slough-like stream bottom conditions. Spawning conditions are fair to about 1/2 mile above the mouth, then deteriorate.

Planting History:

Date	Number Planted	
6/30/53	3000 brook trout	(Anon., 1953b)
5/20/70	4800 coho	(Marriott, 1971)

(Note: Fry from the 1970 plant were probably observed during stream survey.)

Fishing History: Unknown

References: Anonymous, 1953b (Planting history)
Anonymous, 1968 (Chemical data)
Anonymous, 1971 (Salmon counts)
Marriott, 1971 (Planting history)
McConaghy, 1969 (Hydrologic data)
McHugh, 1970 (Pollution)
Orth, 1967 (Location, historical data)

Kowee Creek (111-40-90) Survey Date: 6/23/70

Location: Lat. 58°17'50" Long. 134°25'55" (0.5 miles SW of Juneau)

Description: Kowee Creek flows in a northeasterly direction on Douglas Island for about 2 1/2 miles before emptying into Gastineau Channel near West Juneau. The stream drains a watershed of approximately 2 3/4 square miles and the water is clear. The stream flows under the North Douglas Road, and consequently is easily accessible from the Juneau or Douglas population centers. Access status to the stream is restricted as both banks of the creek, from the bridge to beyond the falls, are privately owned (Macaulay, 1971). The creek was named in honor of Kowee, a chief of the Auk Tlingit Indians, who reportedly had his summer home at the mouth of the creek. Kowee is also credited with guiding Joe Juneau and Dick Harris to their gold find at Silver Bow Basin in 1880. The creek has also been known as Cowee Creek, Kow-eeh Creek, and Kowie Creek (Orth, 1967).

Barriers: Impassible falls about 200 yards upstream from mouth.

Species Present: Unknown

Rearing Habitat:

Number of Areas: The only rearing area observed was the pool at the base of the falls.

Fish Observed: None

Average Catch/Trap: No traps were set.

Evaluation: Rearing areas are nil due to a short length of accessible stream. The only probable rearing area would be the pool at the base of the falls, the rest of stream is riffle areas, with considerable current.

DEPARTMENT OF FISH AND GAME

INTER-OFFICE ROUTE SLIP

[ ] Headquarters [ ] Fairbanks-Reg. III

[ ] Juneau-Region I [ ] Kodiak-Region IV

[X] Anchorage-Reg. II [ ] Nome-Region V

[ ] Other: _____

__Sport Fish __Game X Habitat __Admin.

__Comm Fish __FRED __Comm.Off. __I & E

Attention: Phyllis Weber

[ ] For your info [ ] Circulate
[ ] Comment & return [ ] Action

Remarks: Additional Documentation for Auke Lake, Auke Creek, Lake Creek and Lake Two Creek (There should be 3 des. streams going into Auke Lake)

HABITAT REG. 1
JUNEAU

FROM Hall DATE May 29, 84

11-47(11/78)

Water Supply Study
Auke Lake Campus
UNIVERSITY OF ALASKA, JUNEAU

Kramer, Chin & Mayo, Inc.
Consulting Engineers, Architects, Applied Scientists
510 Goldstein Bldg., 130 Seward Street
Juneau, Alaska 99801 Phone (907) 586-6400

Water Supply Study
Auke Lake Campus

UNIVERSITY OF ALASKA, JUNEAU

MAY, 1978

Kramer, Chin & Mayo, Inc.
Consulting Engineers, Architects, Applied Scientists
510 Goldstein Bldg., 130 Seward Street
Juneau, Alaska 99801 Phone (907) 586-6400

TABLE 9. FISHERIES RESOURCES OF AUKE CREEK WATERSHED

SPECIES	NOTES	POPULATION DATA			AUKE CREEK: Limited spawning area artificial spawning beds in upper reaches have created the major rearing areas. (24)			AUKE LAKE: Limited spawning area, two acreas found. Most spawning in inlet streams. (24)			LAKE CREEK: Major inlet stream-good spawning conditions for about one mile upstream from lake. Overall rearing potential "poor." (24)			LAKE TWO CREEK: Inlet stream probably best stream rearing habitat in system. (24)		
		FISH COUNTED	POPULATIONS	REFERENCE	OCCUR	SPAWN	REAR	OCCUR	SPAWN	REAR	OCCUR	SPAWN	REAR	OCCUR	SPAWN	REAR
Sockeye	Auke Lk. pop. tends to approach max. expected from such a small system. (13)	Adults migrating upstream	7,000 (average) 5,465-10,886 (range, 1964-1971)	(7)	Migrate up-stream June & July (24)		(no) (24)	Yes	Yes (24)	Yes (24)	Yes	Yes-main spawning area (9)	No (24)	Yes	Yes-few (24)	No
Coho	Traditionally in freshwater streams for approximately 1 year before going to sea.	Adults migrating upstream	750(average) 262-1310 (range, 1972-76)	(4)	Out-migration May to mid-June (24)		Yes provides substan-tial rear-ing area (24)	Yes	Maybe (5)	Yes (24)	Yes	Probably (3)	Yes		Probably (3)	
Coho		Jacks Migrating upstream	20(average) 98-377 (range, 1972-1976)	(4)												
Pink	Traditionally go immediately to salt water after emerging from gravel.	Adults migrating upstream	*6,000 (average) *1,768-14,261 (range, 1-72-76)	(4)	Yes	Yes-interti-dally and up-stream near lake (24)		Yes			Yes	Yes- few (24)				
Chum	Traditionally go immediately to salt water after emerging from gravel. Low pop. compared to pink.	Adults migrating upstream	21 (average) 5-45 (range, 1972-76)	(4)	Yes	Yes-below lake and intertidally (24)										
Dolly Varden	Individuals in Auke Lake system include wintering populations from other systems. (31)	Out-migrant sea-run	6,215 (1970)	(24)	Out-migration mid March-early June (3) up-stream migration in July. (31)			Large Wintering Pop. (24)		Question-able (24)	Yes	Yes	Probably yes (24)	Yes	Yes-more than Lake Creek (31)	May serve as major rearing area (24)
Cutthroat	Sea-run and non migratory. Sea-run pop. small. (31) Non-migrating pop. unknown but larger than sea-run. (24)	Out-migrant sea-run Non-migratory	88 (1970) Unknown	(24) (24)	out-migration mid-March to mid-June (24)			Resident indiv. use shallow littoral areas (31)	Unknown (31)	Question-able (24)	Small pop. may reside entire life here (24)	Probably (3)			Probably	
Sticklebacks	Tradionally breed in summer months (FW&SW)-nest is constructed in shal-low water. (10,16)							Abundant (24)								
Cottids (sculpins)	Present in system-abundance unknown. (24)															

* Pink salmon populations include hatchery-production as well as creek production. Hatchery fry production has averaged 75% of total.

NOTE: Blank spaces on the above Table indicate a lack of data, not an absence of fish occurrence.

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(5) Bailey, J. E. "Auke Creek Minimum Flow Requirements," Memorandum to Laboratory Director, Auke Bay Laboratory, U. S. Department of Commerce, NOAA, NMFS, (February 4, 1977).

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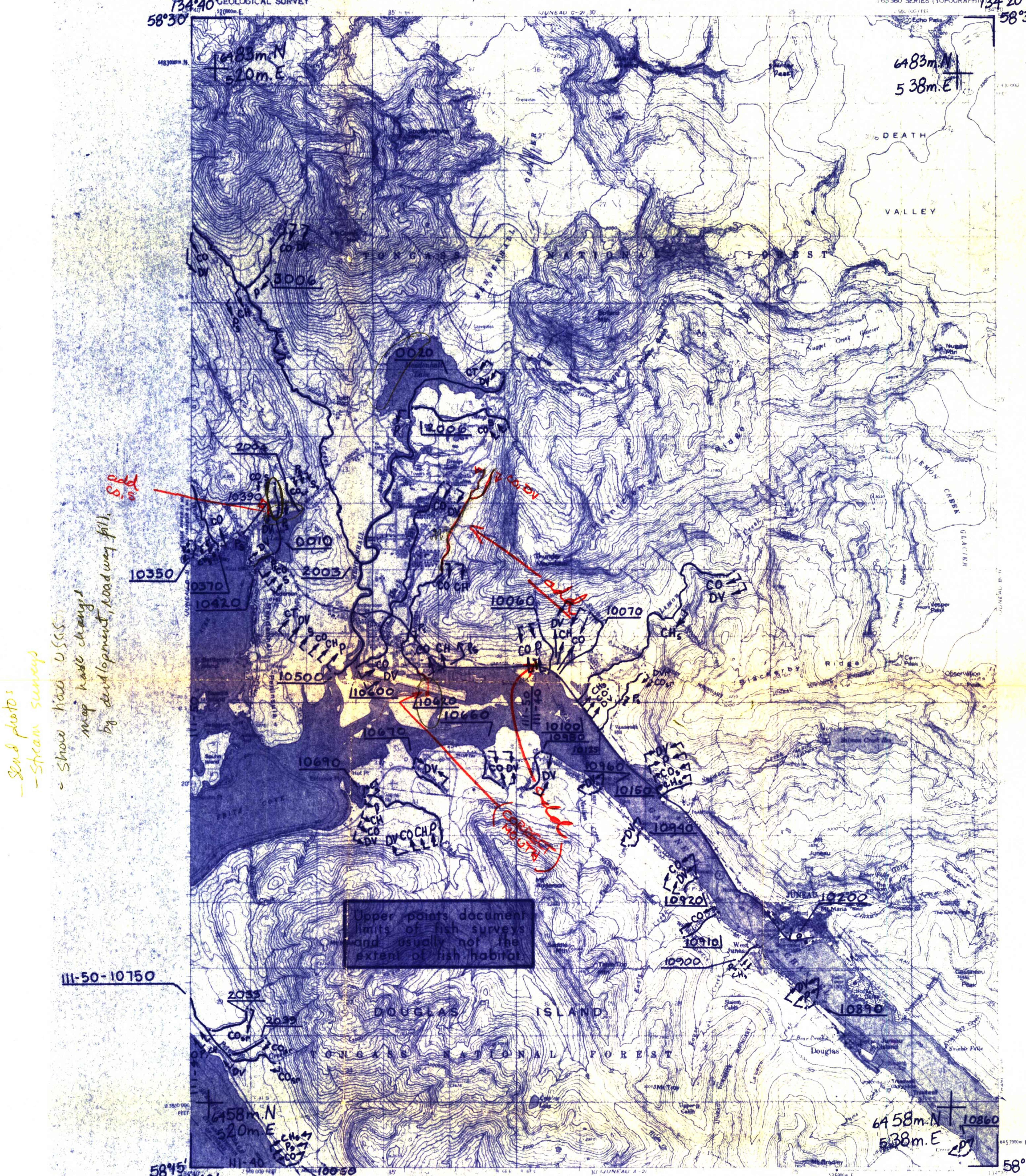
CBJ 77
1" = 500'
12-12
12-10
these two drainages go into Duck Creek
Loop Road
thunder mtn trailer crt
12-8
Jordan Creek
Dudley St.
Glacier Valley School
tributary to Thunder mtn - shown on USGS map
Tongass Blvd
1" = 500'
12-6
Jordan Creek
Egan Expressway

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

JUNEAU (B-2) QUADRANGLE
ALASKA
1:63 360 SERIES (TOPOGRAPHIC)

84-734



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1948. Culture revised 1962. Map field checked 1962

Selected hydrographic data compiled from USC&GS Chart 8235 (1962). This information is not intended for navigational purposes

Universal Transverse Mercator projection, 1927 North American datum 10,000-foot grid based on Alaska coordinate system, zone 1 1000-meter Universal Transverse Mercator grid ticks, zone 8, shown in blue

Land lines represent unsurveyed and unmarked locations predetermined by the State of Alaska, Division of Lands Folio CR-12 Copper River Meridian

Red tint indicates areas in which only landmark buildings are shown

Revisions shown in purple compiled from aerial photographs taken 1974 This information not field checked

Purple tint indicates extension of urban areas

APPROXIMATE MEAN DECLINATION, 1962

SCALE 1:63 360

CONTOUR INTERVAL 100 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES IN FEET. DATUM IS MEAN LOWER LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY

FOR SALE BY U S GEOLOGICAL SURVEY
FAIRBANKS, ALASKA 99701, DENVER, COLORADO 80225 OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION
Medium-duty — Light-duty
Unimproved dirt
State Route

QUADRANGLE LOCATION

JUNEAU (B-2), ALASKA
1962

MAP NO.
B-2
OF
11

LEGEND

S	Sockeye Salmon	**Subscript**
K	King Salmon	s- Known Spawning
CO	Coho Salmon	r- Rearing
P	Pink Salmon	* m- Migration
CH	Chum Salmon	
SH	Steelhead Trout	* Migration upstream is assumed for stream reaches where anadromous fish occur
DV	Dolly Varden	
AC	Arctic Char	
SF	Sheefish	
W	Whitefish	
C	Cutthroat Trout	

COMP. DRC
DRAWN CB
REVISED DRC
APPROVED ERL
DATE 4-82
FILE NO.

SCALE
1" = 1 MILE
1 : 63,360

PROJ. TITLE
ANADROMOUS STREAM CATALOG
ANADROMOUS WATERS ARE LISTED PURSUANT TO AS 16.05.870 (a)

MAP TITLE
JUNEAU, B-2

STATE OF ALASKA
DEPARTMENT OF FISH AND GAME
habitat protection division
JUNEAU, ALASKA

BY	DATE
BB	3/1/83
PW	1/84
REVISIONS	